

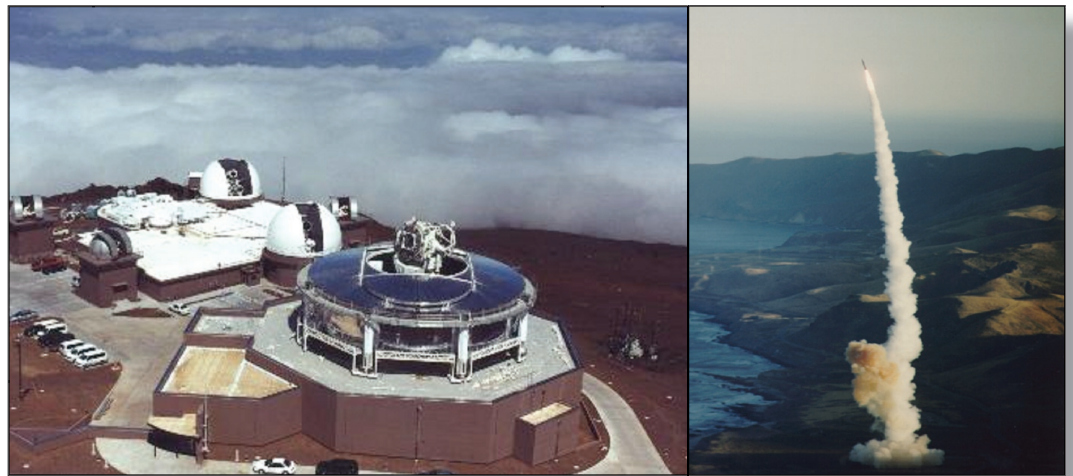


# Air Force Research Laboratory|AFRL

*Science and Technology for Tomorrow's Air and Space Force*

## **Success Story**

### **DIRECTED ENERGY DIRECTORATE CAPTURES AFSPC GT-32PA MISSION**



Directed Energy Directorate scientists and engineers, using the 3.6 m, 1.6 m, and 1.2 m telescopes at the Air Force Maui Optical and Supercomputing (AMOS) site, acquired, tracked, and collected critical data on a Peacekeeper missile launched from Vandenberg Air Force Base, California. They gathered the data during the latest Air Force Space Command (AFSPC) Glory Trip mission—GT-32PA.

Over the past several years, AMOS used the Glory Trip missions to collect valuable data and improve site operations. The focus of AMOS activities was to passively acquire and track the target, collect visible/infrared imagery, collect metric data, and provide AMOS missile operations crews a training opportunity in tracking a ballistic target.



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### **Accomplishment**

Directorate scientists used AMOS to successfully track GT-32PA with all three telescope mounts beginning at 30° elevation as the target rose, to 1° elevation as the target descended. The target's maximum elevation (culmination) was at 51.2° at a range of 1200 km.

AMOS acquired the post-boost vehicle using information from the Pacific Missile Range Facility radars. Directorate engineers witnessed reentry vehicles (RVs) during the deployment phase of the mission.

The directorate considers this AMOS mission an outstanding success with numerous firsts for the site. Some of these firsts include tracking an RV down to 1° of elevation, tracking multiple RVs with the 3.6 m telescope, using Vandenberg's interrange vectors in the mount control systems, tracking hand-over from the 3.6 m to the 1.2 m telescopes, and verifying enhanced long wave infrared detectors developed for associated Missile Defense Agency (MDA) projects.

### **Background**

The directorate's AMOS site has tracked missiles since the late 1960s. However, when AFSPC took command of the site in 1995, missile support operations dwindled with the focus shifting to satellite tracking.

The directorate resumed command in 2000, and AMOS has since rebuilt and enhanced its missile support program. Over the past year, the MDA chose to exploit the site's capabilities and entered into numerous collaborative efforts with AMOS.

### **Additional information**

To receive more information about this or other activities in the Air Force Research Laboratory, contact TECH CONNECT, AFRL/XPTC, (800) 203-6451 and you will be directed to the appropriate laboratory expert. (03-DE-06)